

## MANAGEMENT UNIT 00 - ANTELOPE ISLAND

Antelope Island is currently managed by the Utah Division of State Parks and Recreation. It is the largest island in the Great Salt Lake and can be reached via a 7.5 mile-long causeway. The island encompasses 28,463 acres with elevations ranging from 4,200 feet to 6,597 feet. Campsites are located on the northwest side of the island with trails scattered throughout the area.

### HISTORY

In 1845, John C. Fremont and Kit Carson made the first European exploration of Antelope Island. They shot two antelope and Fremont wrote "in grateful supply of the meat they furnished, I gave their name to the island." By the 1930's, the island's namesake had disappeared from Antelope Island. In 1993, a cooperative effort between the Utah Division of Wildlife Resources and the Utah Division of State Parks and Recreation resulted in the re-introduction of 24 pronghorn antelope. By the 1995 fawning season, the population had nearly doubled in size. It is hoped that predation from coyotes, bobcats and eagles will act as population control for the pronghorn on the island.

Fielding Garr was quick to recognize Antelope Island's potential as livestock range. He began construction of a ranch house in 1848. He not only tended his own herds, but those of other stockmen as well. In 1849, Brigham Young asked Garr to manage the LDS Church's Tithing Herd, which was kept on the island until 1871. During this time, the LDS Church also invested thousands of dollars in valuable stallions and brood mares which were turned loose on the island. Antelope Island was also used as a base camp for a government funded survey of the Great Salt Lake by Captain Howard Stansbury during the years of 1849-50.

On February 15, 1893, twelve head of bison were transported to Antelope Island. John Dooly and George Frary loaded the bison into a small sailboat that nearly capsized as they sailed to the island. The Island Improvement Company owned most of the island from 1884 thru 1972. Cattle and sheep were the company's primary ranching commodity, although buffalo and horses were always on the island. In the 1930's, Antelope Island was the largest private sheep sheering operation west of the Mississippi. Recognizing the recreation potential of the island, the northern 2,000 acres were acquired by the state in 1969. In 1981, the state purchased most of the remainder of the island thus preserving it as a state park for all people to enjoy.

The Great Salt Lake is the largest natural lake west of the Mississippi River. The Great Salt Lake is 75 miles long and about 35 miles wide. Located in several wide flat basins, a slight rise in water level expands the surface area of the lake considerably. The first scientific measurements were taken in 1849. Since then, the lake level has varied by 20 feet, shifting the shoreline in some places as much as 15 miles. The Great Salt Lake is salty because it does not have an outlet. Tributaries are constantly bringing in small amounts of salt dissolved in their fresh water flow. Once in the Great Salt Lake, much of the water evaporates leaving the salt behind.

The Great Salt Lake is the remnant of Lake Bonneville; a great ice age lake that rose dramatically from a small saline lake 30,000 years ago. The most conspicuous reminders of Lake Bonneville are the ancient terraces etched into the landscape along the lake's former shorelines. The terraces were eroded by wave action and are relatively flat areas which follow a contour line. After the ice age, the earth's climate became drier and Lake Bonneville gradually receded to form the Great Salt Lake.

The ever fluctuating Great Salt Lake has frustrated attempts to develop its shoreline. As a result, much of the lake is ringed by extensive wetlands making the Great Salt Lake one of the most important resources for migrating and nesting birds.

## WILDLIFE

The island has a bison herd that fluctuates between 550 and 700, making it one of the largest publicly owned bison herds in the nation. The Antelope Island bison herd is also recognized as one of the oldest in the country and possesses unique genetic characteristics making it of interest to breeders. Other mammals found on the island include mule deer, pronghorn antelope, bighorn sheep, coyotes, bobcats, badgers, porcupines, jackrabbits and several species of rodents. Antelope Island and the Great Salt Lake attract numerous migrating and nesting birds.

## TREND STUDIES

Trend studies were first established on Antelope Island in 1994. Two studies were set up that year with four additional studies put in the next year. In 1996 and 2001, all studies were reread and the results are reported here.

## SUMMARY

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Six trend studies were reread in the spring of 2001.

A common trend throughout all sampling periods is the abundance of annual, weedy species. Most of the sites remain dominated by annual grasses and forbs, primarily cheatgrass and storksbill. Due to the extremely dry conditions in 2000-2001 in Northern Utah, cheatgrass actually decreased in cover on 4 sites, and decreased in nested frequency on 5 sites. Rattail and six weeks fescue both decreased in cover and nested frequency on most of the studies as well. Decreases in cheatgrass cover and nested frequency resulted from individual plants being slightly less abundant and smaller in stature due to the dry winter and spring prior to sampling. However, even with these decreases, cheatgrass remains very abundant as shown by the fact that it was sampled in nearly every quadrat on all of the studies on Antelope Island. Unlike cheatgrass, storksbill increased in cover and nested frequency on all 6 studies in 2001. It is the most abundant forb on all of the trend studies in 2001, except at the Alfalfa Seeding study.

Perennial grasses increased in both cover and sum of nested frequency on all 6 studies in 2001. Most of the increase in both cover and frequency is due to the increase in 2 low value species, purple three-awn and bulbous bluegrass. Perennial forbs decreased in sum of nested frequency on 4 studies, increased on 1 study and remained stable on the another. The forb component on these studies consists almost entirely of infrequent, weedy increasers so the loss of perennial forbs is not key.

Due to short, intense, recurring fire intervals on the island, browse is virtually non-existent on all of the trend studies. Browse species will likely never play an important role in the vegetative make-up of these studies because reproduction will be difficult without a lot of resource input. Remnant browse populations, primarily big sagebrush, have very little chance of reproducing naturally due to very low densities, high competition with annual weeds, and short fire intervals.

A summary table with trends follows.

# Trend Summary

	Category	1994	1996	2001
00-1 Tin Lambing Shed	soil	est	4	3
	browse	est	3	n/a
	herbaceous understory	est	3	3
	Category	1995	1996	2001
00-2 Frery Homestead	soil	est	3	3
	browse	est	3	n/a
	herbaceous understory	est	3	3
00-3 Garden Springs Flat South	soil	est	3	3
	browse	est	3	n/a
	herbaceous understory	est	3	4
	Category	1994	1996	2001
00-4 Alfalfa Seeding	soil	est	3	3
	browse	est	3	n/a
	herbaceous understory	est	3	4
	Category	1995	1996	2001
00-5 Buffalo Scaffold	soil	est	3	3
	browse	est	n/a	n/a
	herbaceous understory	est	3	4
00-6 Timely Gull Ridge	soil	est	3	3
	browse	est	n/a	n/a
	herbaceous understory	est	3	4

(1) = down, (2), slightly down, (3) = stable, (4) = slightly up, (5) = up  
 (est) = established, (n/a) = no trend